

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/890,836

DATE: 10/29/2001

TIME: 14:15:10

Input Set : A:\20377YP SEQ LIST.TXT

Output Set: N:\CRF3\10292001\I890836.raw

ENTERED

4 <110> APPLICANT: Andrew Bett  
5 Volker Sandig  
6 Rima Youil  
8 <120> TITLE OF INVENTION: IMPROVED HELPER DEPENDENT VECTOR SYSTEM  
9 FOR GENE THERAPY  
11 <130> FILE REFERENCE: 20377YP  
13 <140> CURRENT APPLICATION NUMBER: 09/890,836  
C--> 14 <141> CURRENT FILING DATE: 2001-09-28  
16 <150> PRIOR APPLICATION NUMBER: PCT/US00/02405  
17 <151> PRIOR FILING DATE: 2000-01-31  
19 <150> PRIOR APPLICATION NUMBER: 60/138,134  
20 <151> PRIOR FILING DATE: 1999-06-08  
22 <150> PRIOR APPLICATION NUMBER: 60/118,601  
23 <151> PRIOR FILING DATE: 1999-02-04  
25 <160> NUMBER OF SEQ ID NOS: 17  
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
29 <210> SEQ ID NO: 1  
30 <211> LENGTH: 15  
31 <212> TYPE: DNA  
32 <213> ORGANISM: Artificial Sequence  
34 <220> FEATURE:  
35 <223> OTHER INFORMATION: Consensus sequence  
37 <221> NAME/KEY: misc\_feature  
38 <222> LOCATION: (1)...(15)  
39 <223> OTHER INFORMATION: n = A,T,C or G  
41 <400> SEQUENCE: 1  
W-42 atttgnnnnn nnngc 15  
44 <210> SEQ ID NO: 2  
45 <211> LENGTH: 10  
46 <212> TYPE: DNA  
47 <213> ORGANISM: Artificial Sequence  
49 <220> FEATURE:  
50 <223> OTHER INFORMATION: Adenovirus 5  
52 <400> SEQUENCE: 2  
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56 <211> LENGTH: 10  
57 <212> TYPE: DNA  
58 <213> ORGANISM: Artificial Sequence  
60 <220> FEATURE:  
61 <223> OTHER INFORMATION: Consensus sequence  
63 <400> SEQUENCE: 3  
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66 <210> SEQ ID NO: 4  
67 <211> LENGTH: 158  
68 <212> TYPE: DNA  
69 <213> ORGANISM: Artificial Sequence

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71 <220> FEATURE:
72 <223> OTHER INFORMATION: Synthetic packaging signal
74 <400> SEQUENCE: 4
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76 gggccgagta agatttgacc gtttacgcgg ggactttgaa taagagcgag tgaaatctga      120
77 ataattttgt tgtactcata gcgcgtaatc tctagacg      158
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 158
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Adenovirus 5
87 <400> SEQUENCE: 5
88 gtacacagga agtgacaatt ttcgcgcggt tttaggcgga tgttgtagta aatttgggcg      60
89 taaccgagta agatttggcc attttcgcgg gaaaactgaa taagaggaag tgaaatctga      120
90 ataattttgt gttactcata gcgcgtaatc tctagacg      158
92 <210> SEQ ID NO: 6
93 <211> LENGTH: 65
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Linker
100 <400> SEQUENCE: 6
101 agctcggccg attattggcg cgccagatct gcggccgctt ctagaaacgc gtgaattcgg      60
102 cgcca      65
104 <210> SEQ ID NO: 7
105 <211> LENGTH: 65
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Linker
112 <400> SEQUENCE: 7
113 agcttggcgc cgaattcacg cgtttctaga agcggccgca gatctggcgc gccataatc      60
114 ggccg      65
116 <210> SEQ ID NO: 8
117 <211> LENGTH: 40
118 <212> TYPE: DNA
119 <213> ORGANISM: Artificial Sequence
121 <220> FEATURE:
122 <223> OTHER INFORMATION: PCR Primer
124 <400> SEQUENCE: 8
125 attggcgcgc cttctttctg ggatgattca gcatcaactc      40
127 <210> SEQ ID NO: 9
128 <211> LENGTH: 41
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial Sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: PCR Primer
135 <400> SEQUENCE: 9

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141 <213> ORGANISM: Artificial Sequence
143 <220> FEATURE:
144 <223> OTHER INFORMATION: PCR Primer
146 <400> SEQUENCE: 10
147 atcagtttagc ggccgcacaa gctaagatca caaagctgtt t 41
149 <210> SEQ ID NO: 11
150 <211> LENGTH: 37
151 <212> TYPE: DNA
152 <213> ORGANISM: Artificial Sequence
154 <220> FEATURE:
155 <223> OTHER INFORMATION: PCR Primer
157 <400> SEQUENCE: 11
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161 <211> LENGTH: 39
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: PCR Primer
168 <400> SEQUENCE: 12
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171 <210> SEQ ID NO: 13
172 <211> LENGTH: 45
173 <212> TYPE: DNA
174 <213> ORGANISM: Artificial Sequence
176 <220> FEATURE:
177 <223> OTHER INFORMATION: PCR Primer
179 <400> SEQUENCE: 13
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182 <210> SEQ ID NO: 14
183 <211> LENGTH: 41
184 <212> TYPE: DNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: PCR Primer
190 <400> SEQUENCE: 14
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193 <210> SEQ ID NO: 15
194 <211> LENGTH: 46
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial Sequence
198 <220> FEATURE:
199 <223> OTHER INFORMATION: PCR Primer
201 <400> SEQUENCE: 15
202 tcgacgcgta tttaaatgtg ctggagtgtt gagatactgt agtggt 46

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207 <213> ORGANISM: Artificial Sequence
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210 <223> OTHER INFORMATION: Modified adenovirus
212 <400> SEQUENCE: 16
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214 agtttgtgac gtggcgcggg gcgtgggaac ggggcgggtg acgtagtagt gtggcggaag      120
215 tgtgatgttg caagtgtggc ggaacacatg taagcgacgg atgtggcaaa agtgacgttt      180
216 ttggtgtgcy ccggtgtaca caggaagtga caattttcgc gcggttttag gcggtgttg      240
217 tagtaaat tttggcgtaacc gagtaagatt tggccatttt cgcgggaaaa ctgaataaga      300
218 ggaagtga tctgaataat tttgtgttac tcatagcgcg taatatttgt ctagggccgc      360
219 ggggactttg accgttttac tggagactcg cccagggtgt tttctcaggt gttttccgcg      420
220 ttccgggtca aagttggcgt tttgattcgg ccgcttgggt catagacttc tttgagaacc      480
221 agttataaag tatggtttct ctccacagaa aaagcactta tgggtgtctcc ccctttccag      540
222 cccaccaaca ttttacatct aatttggggg ggttttcttg accacttaat acccatccat      600
223 ggatctcatg tgaagactcc cctggcttga gaaatcactg tcttgttgaa aatgggaaca      660
224 aagctaagtc agatagctgg ttcacagca atgactttga ccaagcctga tcccacccta      720
225 cccaccccca cccagtgac cccccccac aatggagcac acaactctaa actggtttgt      780
226 aggtatgtgt gtgtgaaccac gctgaggaat ctgcaaaacc aaatggtgag tgcaaaacca      840
227 aacagtcacg agtaaatctc acaacaacca cgtcctgagc tgcagccctt gttgaactat      900
228 accccactag ggccccaaga ttttaggact tgtgtgtggg tgggacctcc ctttctatc      960
229 atgctttaga agacagggat ttcaccagaa ttgaacatat tgaacatatg acccattttt     1020
230 ttcagccaaa ggcaattaaa ataacttcat acttgatc catgtcagca aaagctgcaa     1080
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233 tacatgaagg aacacctcta ctctcctgct ttaataacct gagctgtgag tgatcatcta     1260
234 tgtccattag caaacatccc agtggagaag gaaacactca taccgaaat ctaagctaca     1320
235 tagttggaat cacttcaact tattgcaata aacacttact aagcacctat tgtgggcaag     1380
236 tctttgcaat ggataatagt tcagtagata ttttgatgta atatttgaaa taacaataaa     1440
237 aattgccacc actgaattta ttgagcattt gctgtgcttt aggcactaac ccaggttctt     1500
238 taaatatttg gtcttattcg atctgtataa atagccatct atgagaaaag gactattatt     1560
239 gcccttattt tacaaatgag gccaatgagg cccagagagg ttaactaagt tgcccaaaat     1620
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241 acatgtcgtt tgcattggtg tggaggtgtg catgtgttta gtcattagca tgttatatga     1740
242 taagcaagtt ttgaaacata gaaacttaaa atgtgccatt aagaaaagta caggcaaggt     1800
243 tttccaaggg gaggtgtgga cctccggaca aatttttaag aactaattat aaatacttaa     1860
244 aaatgggaat aagaagacaa cctaactacc tgaacagttt tagagatgac tcatgccac     1920
245 cctctaaaaa ccaaacaaaa acaacaaagt caagaaaacc catgaaatct tagcaagcga     1980
246 tttctatgta cttgtgaaaa ggatttcttt accattctaa tgggatttat gccaacata     2040
247 gagggctcag tgcccctccc atgggggtgt tagtgagtac agagctgagc tcaccggcca     2100
248 tctgcagctt catgttatca agctccagtt tgtccttgga gcaagggtat ctgggacatg     2160
249 agcagaggca ttgctttctg caatggacag ttctttctgc ctgcatacct agctccttga     2220
250 taactttaaa taccatttta tagccacact ggagttttga agacctcaat atgcaaatat     2280
251 tactcaggtt ctgataactt gtctgtccca tgataacaca ctctaaaagc aatgaatggg     2340
252 gcttatttgt agagaactga agcattttaa gcttttgctc aggaatccct ggtagcttcc     2400
253 tgtgacttgc aagataattag tgatgggtca agaaacagga ccccccata gcataacata     2460
254 cgcagtgccct cagtagtcca tcaggcagaa aaaactgcag atggcacatg gaaatgacca     2520

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255	gcggcggaag	atacccccac	agtgtgggca	gttctatttc	agcagcaatc	aagagggggc	2580
256	ctggagccac	tcaatcaagt	ggagcaggat	gggagcaagc	actgtgcaga	ccaatgcaat	2640
257	ccccagttaa	cacaaaaaat	aaataaaaga	gatgagattc	agtctcttga	ctgtgactga	2700
258	ctgggagctt	tatagctgat	gcttgtgtct	tttctccatt	ttattttaatt	aggaaaagaa	2760
259	atgcttatca	cacactctac	gtgtgaggta	caacctccac	aggaaaaggt	gttaggaaca	2820
260	tttcaacttc	tagaagtttc	taaacataag	gtaaatccat	ctttgtcctt	gggatcactg	2880
261	cacatctcag	aaaggcaaat	aatcagtaa	ttggtgggca	taattactag	ctcatggact	2940
262	gacaaggtct	acactatttc	gaatctcaca	gaagtaagcc	atgggacaga	tagagtctga	3000
263	tagtggtgcc	ccgtttcctg	gaggtcacac	ttactcatcc	ccctggacc	tgggcttctc	3060
264	atgattgtca	gagagtttgc	tggaaaccag	tcagcccagt	ttcccttccc	ctgaaaaatc	3120
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266	ccaggttttg	cgttccataa	tgtcacgtac	ccccagtc	accaatctcc	ttggagctct	3240
267	ccagacaggc	tgccatgtgt	ggtcggccct	ctgtgcttgt	gtccttgggt	ttgccaaagc	3300
268	tggaaatgcc	tttctccatg	attgtactct	gggaattctg	tgtgtctttc	gagatgaagc	3360
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275	gagagtgatc	ataatcatat	ggtgaaaata	acatcagcta	acatattttac	tgaacatgct	3780
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278	gacagaaaacc	aagctagaaa	ccaagcaacc	cctgggtttg	gaaatgcatg	ggctcctcct	3960
279	ctgcacatgg	cgaggagcag	tcagggtgctc	ctccttctct	catactgaaa	taactctgca	4020
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285	accttttctt	tccttggcct	ttactaacca	tgtaacagaa	atgagcagag	aaaacccaag	4380
286	aaagcgaact	ggagacttga	tgagtgtgtc	aaagatgctc	agagtccaag	gtcctctgtg	4440
287	gctcactgac	ttcagaagcc	aacctccgtt	gttcaagtca	cttgtgaggt	tactatgcta	4500
288	gagcactaaa	tattatccag	atagcccaaa	gaggtgaagg	cagacatgtg	gaagaacctg	4560
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292	cataagtatg	catctattaa	taacaatgca	agaaaagctgt	acaactgaag	tctgagattt	4800
293	tgtaaagaaac	agaatctctg	taagcatcac	catccaacag	aacttcctga	gttgatgctg	4860
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297	gcctcccag	gaggctgctt	cctttgtttt	gcagatggag	gctcccatcc	tttgtttctga	5100
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301	ggacgccta	ggcgtgtg	ccttttataa	acaaagctat	gaaggggtcg	tcaaattttc	5340
302	tagggctgca	actgtggcac	tacgtcctgt	tgtgcccagg	gacactgaca	agcagcactg	5400
303	agttctatgc	aagcccagg	gtgcttctct	catggtgacc	cccagagaac	taaggcccag	5460

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1